

### THE SOY BEAN.

**Prof. Johnson Reports Some Tests that will Interest Prospective Growers of the Crop.**

Editor of The Progressive Farmer:

In a recent number of your paper there is a request for the experience of North Carolinians who have grown soy beans. There is practically no difference in climatic conditions prevailing throughout the western half of North Carolina and the northern half of Georgia. I think, therefore, that what I am about to write may be of some value to at least some of your readers.

Early in June of last year we plowed a piece of rather stiff clay land on the University of Georgia farm. The soil was very hard and dry at time of plowing, and broke up in quite large clods. The plow had been set to run eight inches deep but in some places the ground was so hard and compact that the plow did not go more than seven inches in depth. Immediately after plowing, the land was harrowed with a Cutaway harrow, going over it twice. In order to more fully pulverize the soil the harrow was followed with a rather heavy farm roller. The seed bed was yet too coarse for the greatest satisfaction from the after cultivation. However we then set aside one-eighth of an acre of this field for soy beans.

The rows were run off three feet apart. Then a mixture of equal parts by weight of phosphoric acid (14 per cent phosphorus) and kainit 13.5 per cent potash) was applied at the rate of two hundred pounds per acre.

The beans were then put in with a horse-power corn-planter, set to drop one or two beans every eight inches. Just before the beans were coming through the ground a light smoothing harrow was run lengthwise of the rows to break a slight crust that had formed. After this the beans were gone over once by hand to cut out some weeds, and three times with a shallow-running horse cultivator. The months of July and August were unusually dry and hot.

By the middle of September the beans stood three and a half to four feet high all over the patch, and the branches met and interlocked until the ground was completely hidden from view even at a distance of half a rod or less.

The root growth made a perfect net work through the soil, and going to a depth of two or three feet, and in some cases even deeper.

In October the beans were cut to be cured for threshing for seed. About the time our beans were ready to harvest the dry weather gave place to a rainy period of two or three weeks duration, during which time we had showers almost daily.

As soon as cut, the beans were gathered up and placed in small stacks with the butts toward the centre and the tops to the outside. These stacks were from four to six feet high and from four to five feet in diameter. After two or three

days of clear and warm weather when the beans had been in the shocks three weeks, the shocks were opened up and to our surprise the beans had not suffered in the least from the rough weather to which they had been subjected.

The beans were then taken to a dry, smooth place at one side of the patch and beaten out with ordinary sticks such as the mountain farmers of Maryland and West Virginia use in threshing buck-wheat.

From the eighth of an acre under observation we gathered two and a half bushels of nice clean beans. This yield of seed beans made this crop a profitable one to grow, but there was something else that made it far more to the advantage of the farm. The great root development left considerable new vegetable matter in the soil. The roots from row to row were remarkably well stacked with the nitrogen-gathering organisms, which on our unusually worn soils of some sections of the Piedmont regions, is of far greater importance to the farmer than is the yield of seed alone.

From another part of the farm a rather poor crop of oats were taken in June, and in July the land was plowed and a part of it planted to soy beans and a part to cow-peas. The cultivation was exactly the same for the peas and the beans. The growth was cut while yet green and fed to dairy cows. The weights of beans and peas were not kept, but the results from feeding were such as to satisfy us that the beans were fully as valuable acre per acre as were the cow-peas.

After the beans and the peas were removed the land was planted to wheat. The preparation and after-treatment given the pea and bean stubble lands was identical. At this writing there is no difference to be detected in the appearance of the wheat as it stands over the field.

We shall plant more largely of beans this year.

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### Mississippi Valley Farmers All Right.

New Orleans, La., April 13.—The river here went back to 19.9 feet today, a fall of one-tenth of a foot. Work on the crevasse has been resumed and there is promise that the labor will be sufficient to carry on the attempt at closing. If the present rate of decline continues at Hollybrook, it is expected that within the next ten days or two weeks water will practically break there. In that event planters will have ample time in which to sow their crops.

Col. Olds:—The cigar factory here intends going out of business because the American Cigar Company has cut the prices so low. The latter distributed 7,000 cigars free in Raleigh last week, and are giving a bonus in money and cigars to purchasers, it is claimed. Officers of the local company say that they cannot compete with the trust.

### A Batch of Timely Farm Notes.

Editor of The Progressive Farmer:

The barn, the corn crib, the wheat bin and even the farm house itself can be divested of all noxious and destructive insects and vermin by the use of bi-sulphide of carbon. It is a liquid which forms a powerful and volatile gas very penetrating. If liberated in any tight place it will search every crack and kill every bug. The usual proportion given is one pound to 800 or 1,000 cubic feet. Some authorities recommend a pound of bi-sulphide of carbon for each 100 bushels. No injury is done the grain by its use, nor is there any danger from feeding the grain afterwards, as the bi-sulphide of carbon entirely disperses. Since the stuff is very explosive its use in connection with lighted pipes or cigars should be pre-avoided. The Department of Agriculture has recently republished a bulletin on the subject which contains authentic instructions for the killing of weevils, rats, moles, etc.

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It is a question whether there is more wisdom in setting out a "bargain" fruit tree in well prepared land and in fertilizing and cultivating it conscientiously until it comes into bearing and proves to be untrue to name or to have a scrub tree, than in buying a first-class tree from a reputable nurseryman, then setting it out and letting the grass and weeds grow up around it, the rabbits and borers investigate it and otherwise neglecting it, until finally it comes into some kind of bearing in spite of you. These are two ways; there is a third.

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While nitrate of soda is the most soluble and quickly available form of nitrogen for plant use, and likewise the cheapest, it is the least enduring of any of the nitrogenous fertilizers. If the entire nitrogenous application is made to the soil at the planting of a crop requiring several months to mature the chances are that if nitrate of soda is used there will be an insufficiency of this element to perfect the crop.

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An acre in some corner of the farm can very profitably be set aside for post growing. The Bureau of Forestry has recently published a forestry bulletin on growing the hardy catalpa for wood, posts, etc. The catalpa makes an excellent post, which will last thirty years. Much depends upon the soil, but young catalpa trees should make good posts in six or eight years.

The osage orange also makes a lasting post. Sometimes there is an old osage hedge which has so grown up that the trees can be cut and used for posts. If cut down close to the ground the hedge will rapidly regrow itself and make a thick and almost impervious fence.

The objection that the roots of an old osage hedge "draw the ground" for a tree row on either side, can be met by running a deep furrow alongside and five or six feet from the hedge once a year, and breaking the

roots. This will not injure the hedge. If good results are expected from the post-acre, it should be located on as good land as there is on the farm and well watered, and it will grow posts for one hundred acres or more.

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There has been considerable demand for a farmers' bulletin of the Department of Agriculture describing the important insects which prey on growing wheat. The Department bug specialists state that much of the annual loss from insect depredations, amounting in bad years to millions of dollars, can be overcome by proper attention to preventive methods. The bulletin is concise, clear and well illustrated. It can be procured like other "farmers' bulletins," by applying to Senators or members of Congress or to the Secretary of Agriculture.

GUY E. MITCHELL.

### Horse-Feeding Experiments.

The U. S. Department of Agriculture has just issued Bulletin 125, Office of Experiment Stations, entitled A Digest of Recent Experiments on Horse Feeding, by C. F. Langworthy, Ph. D. This bulletin is a compilation which summarizes and discusses recent experimental work with horses, especially that carried on at the agricultural experiment stations in the United States. The principles of nutrition with reference to horse feeding are discussed and figures are given showing the composition and digestibility of the coarse and concentrated fodders commonly fed to horses. Experiments are summarized which discuss the comparative value of the different feeding stuffs and special attention is paid to some, like molasses, which are becoming more important than formerly. The comparative merits of different ways of preparing feed are also treated as well as the proper time of watering and the amount of water required. Something is also said of the energy expended for different kinds of external work and its measurement, the energy required for chewing and digesting food and other forms of internal muscular work, and similar topics.

Data are summarized in the form of a table, which shows the nutrients and energy furnished per 1,000 pounds, live weight, by the rations fed to American and foreign army horses, cab and bus horses, etc., as well as those supplied to the horses of express companies, fire companies, packing houses, breweries, etc., and the farm horses employed at the different experiment stations, such data having been especially compiled for this bulletin. Average values were calculated, showing the amount of nutrients furnished to horses performing different amounts of work, which it is believed may serve as a guide in fixing upon suitable rations.

"Young man," said her father, sternly, "can you support a family?" "Gee whizz!" exclaimed the young man, "you haven't lost your job, have you?"